A SIMPLE DROSOPHILA TRAP FOR WET WEATHER COLLECTING

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When an ecological study of *Drosophila* is undertaken, it becomes necessary to make collections during all seasons of the year. One of the most difficult periods in which to collect is during damp weather. Open traps such as the bottle or paper cup fill with water, and in addition, the paper cups fall apart when saturated with water. As a result, very little collecting can be accomplished during a wet period.

The type of trap described here is illustrated in Figure 1. It consists of a lamp globe, a tight fitting glass cover for the base of the globe, a paper clip or short length of wire, a small paper "nut" cup to contain the lure, and a support for the globe, such as a ring stand as employed here. The distal two inches of the neck of the globe is painted black. In the upright position, the neck is directed downward with the covered base at the top.

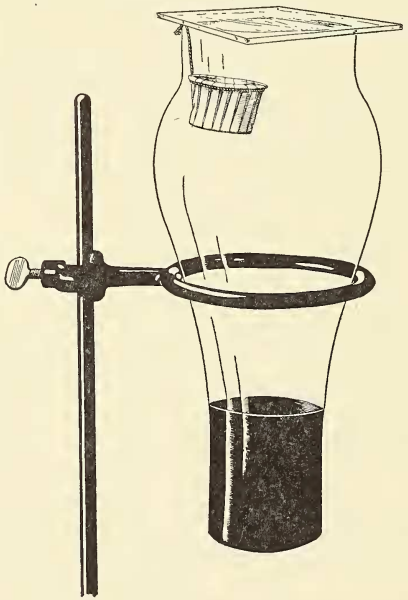

Fig. 1. A simple *Drosophila* trap for use in adverse weather.

The *Drosophila* follow the scent of the lure to the neck of the globe, and since most species of *Drosophila* are phototropic, they will fly up into the base of the globe where there is more light.

(The distal end of the neck is relatively dark since it has been painted black.) Because the *Drosophila* are very reluctant to fly down into a dark opening, they remain trapped in the more illuminated part of the globe.

To remove the specimens from this trap for examination in the laboratory, a cotton and gauze plug is inserted into the open end of the neck in the field. The *Drosophila* can then be etherized in the laboratory and dispensed in vials as desired.

A comparison of two collections made at the same time from one paper cup and one lamp globe under dry weather conditions is given in Table 1. It appears from this data that the only significant difference between the "catch" of each trap is the number of *Drosophila* caught. The various species of *Drosophila* were attracted to both types of traps. However, the globe type of trap described above is designed chiefly for use during adverse weather conditions.

This paper is part of a larger study recently completed on a phase of the ecology of *Drosophila melanogaster* which is being published elsewhere. The author gratefully acknowledges the invaluable suggestions and financial aid rendered by Dr. David D. Perkins of the Department of Biological Sciences, Stanford University, Stanford, California. This study was made at Stanford during 1949 and 1950.

TABLE 1

A COMPARISON OF TWO COLLECTIONS MADE BY THE PAPER CUP TYPE OF TRAP AND THE LAMP GLOBE TYPE TRAP UNDER IDENTICAL CONDITIONS.

Paper Cup Type Trap

Species	Oct. 12	Oct. 13
D. melanogaster	253	103
D. pseudoobscura	1	1
D. melanopalpa		1
	254	105

Lamp Globe Type Trap

Species	Oct. 12	Oct. 13
D. melanogaster	114	60
D. pseudoobscura	1	
D. melanopalpa	2	
D. busckii		1
	117	61